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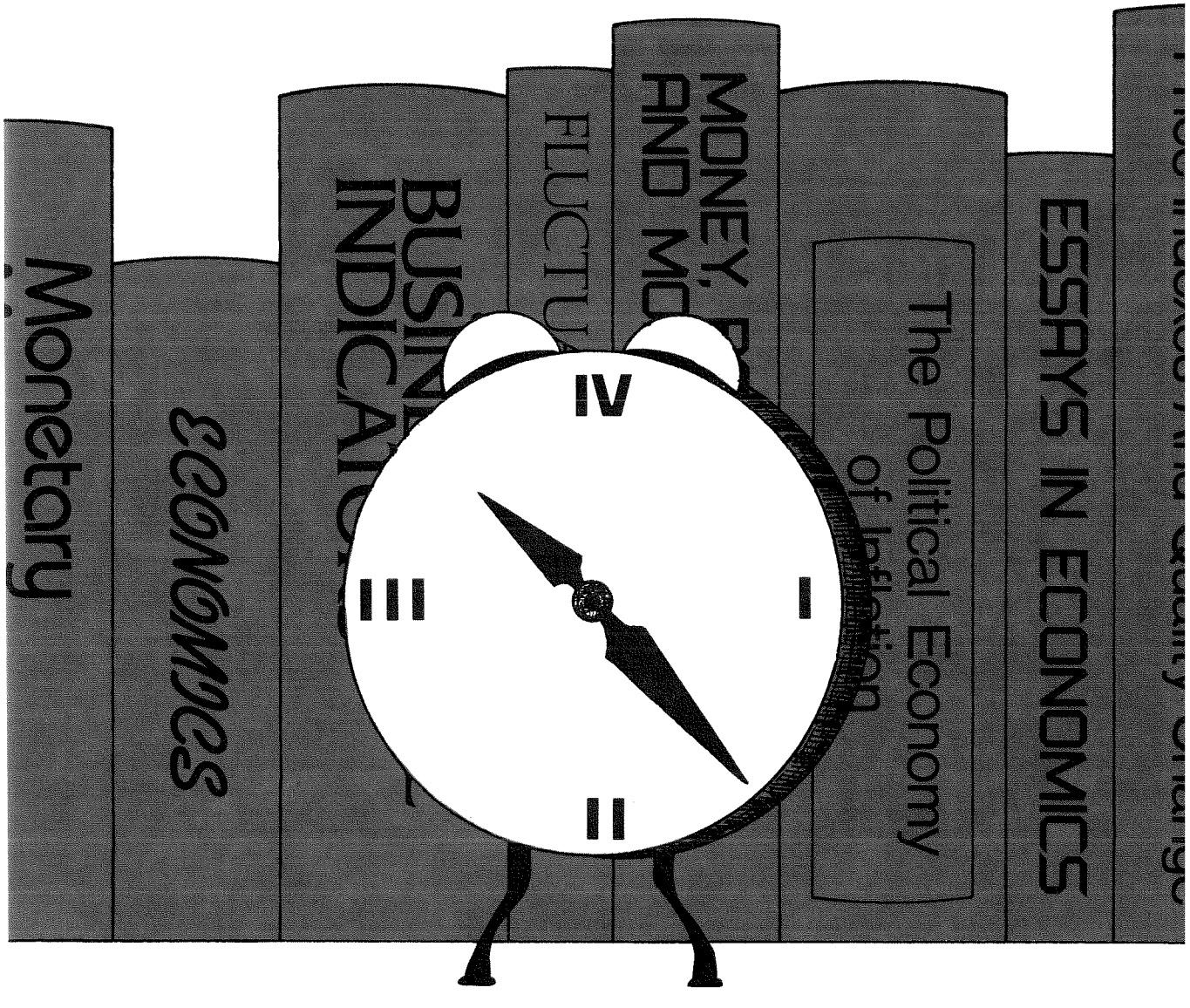

TIME AND ECONOMICS

Time and Economics

In economics, timing is often all-important. The articles in this Review demonstrate that economic decisions made today, and their outcomes, can depend crucially upon what happens, and can be expected to happen, in the future.

In the first article, Rose McElhattan discusses the duration of the impacts of fiscal budget deficits on prices, inflation, and real output. She distinguishes between the long-run and the short-run effects of deficits caused by spending and tax policies.

McElhattan notes that, by conventional reasoning, federal deficits are likely to have short-run stimulative effects on aggregate demand but that, in the long-run, deficits occurring without an accommodating change in the money supply can have one of three impacts: (1) they may crowd out an equal amount of private sector spending and leave the nation's productive capacity unchanged; (2) they may crowd out a greater amount of private spending because the government expenditures replacing private investment are less productive; (3) they may increase the nation's productive capacity if they have positive supply-side effects. McElhattan explains the concept of crowding out as the result of "additional demand related to the deficit which places upward pressures on market prices and interest rates which then reduce some private sector interest-sensitive spending."

To test the impact of federal spending and tax policies upon real GNP and inflation, McElhattan used reduced form equations in which changes in real GNP and inflation are functions mainly of changes in money growth and changes in real federal high employment expenditures and tax revenues. The sample period used to estimate the equations range from the second quarter of 1966 to the fourth quarter of 1979.

McElhattan found significant real output effects when deficits were measured by their components —high employment expenditures and tax receipts —relative to the components' past average rates of change. She suggests that these measures may serve "as crude estimates of unanticipated changes in the deficit." Anticipated changes, she notes, can be immediately incorporated by the public into higher market prices and interest rates and have but little effect on real output.

The results of McElhattan's study point to the existence of temporary output and inflation effects and lasting price level changes. An increase in tax revenues or real expenditures steadily raises the level and the rate of growth of real GNP. After 1 to 3 years, the effects die out leaving no traces after another 2 to 3 years. McElhattan cites the lack of a long-run output effect as evidence of complete crowding out.

A sustained tax cut, or an increase in real government spending, also temporarily raises the inflation rate. The rate change peaks in 2 to 3 years and disappears at the end of 5 years. Price levels, however, remain at a higher level. A 1 percent tax cut leaves the price level 1.2 percentage points higher than its initial level, while a 1 percent increase in real expenditures leaves the price level .4 percentage points higher.

In summary, McElhattan writes: "The real GNP response to changes in federal deficits appears to be transitory, and in the long-run, changes in the deficit appear to crowd out about an equal amount of some private sector spending...Changes in deficits also appear to change the rate of inflation in the short-run and the price level in the longer run..."

The second article, by Joseph Bisignano, extends the simplest consumption model in which an individual decides between present and future consumption on the basis of the "price" at which a dollar of consumption today can be transformed into a dollar of consumption in some future period. The price is the real interest rate relevant to the two periods but the exact effect on present consumption is ambiguous because of opposing income and substitution effects. Bisignano's article extends this

simple model beyond two periods by using the entire term structure of real interest rates—because consumption depends "on the entire structure of interest rates over the horizon of potential future consumption."

Bisignano's analysis uses the framework of the Life Cycle-Permanent Income model in which "individuals make consumption decisions about what individual goods to purchase in a temporal framework" subject to wealth or permanent income constraints. He points out that while economists have recognized that consumption decisions depend on the term structure of real interest rates, they have seldom used the term structure in their studies. His analysis therefore attempts to isolate the effects on consumption of permanent income, term structures of interest rates and inflation, and price levels in four countries: the United States, the United Kingdom, Canada, and the West German Federal Republic.

Changes in price levels, Bisignano notes, can create a "money illusion" of short-run changes in relative prices. Inflation affects consumption in three ways: by changing real taxes if the tax system is not indexed to inflation, by changing real liabilities and therefore real net wealth, and, when future inflation is uncertain, by reducing current consumption in risk averse individuals.

The results of his analysis show that, in general, in the context of a permanent income consumption model, the term structure of real interest rates plays a significant role in consumption behavior. He found that a rising term structure of real interest rates decreases current consumption in the cases of the United States, the United Kingdom, and Canada and increases current consumption in the case of Germany. Holding real interest rates constant, he found that a rise in inflation "appears to increase real consumption in the U.S. and Canada and to reduce consumption in the U.K. and W. Germany."

These findings, Bisignano notes, have implications for the national economy. According to Bisignano, recovery from the recession of 1982 will likely be led by improvements in the consumption sector, with the response of that sector to future expectations embodied in the term structure of real rates determining the strength and duration of the recovery. Based on his findings, he concludes that the quantitative effect of the major decline in real interest rates from June to August 1982 should outweigh the effect of the decrease in inflation and "should provide a major boost to consumption and to the general economic recovery."